

doubtedly the latter species was found by the writer near Chicago a few days since on *L. scrophularicifolius*. He also advocates keeping the *Æcidium* on *Ranunculus abortivus* (*Æ. Ranunculi* Schw.) as a species separate from *Æ. Ranunculacearum* DC., which is common to many *Ranunculaceae*, and suggests that it may belong to some *Uromyces* on a monocotyledonous host.

CURRENT LITERATURE.

Supplement to the Catalogue of the Davenport Herbarium.—This brings the Fern Catalogue up to March, 1883, and contains valuable notes on various species, by Mr. George E. Davenport. Mr. Davenport also publishes a very neat and convenient Check List of N. A. Ferns, including 32 genera, 161 species, and 24 varieties.

Botanische Mikrochemie, by V. A. Poulsen, translated from the Danish by Carl Müller. pp. xvi, 83. Cassel: Theodor Fischer.—The publication by Mr. Penhallow of his "Vegetable Histology" recalls a little book by the above title, which, though published more than a year ago, has not received the attention in this country which it deserves. To every reader of German it will commend itself at once, and its German is so easily read that even a student with but a cursory knowledge of the language will find little difficulty in picking out from it much that is useful. The first part of the book is devoted to "The Microchemical Reagents and their Use." Under this head fifty reagents are named. The manner of using each and the reactions for which they are used are clearly and briefly stated. To this part is appended a few pages treating of preservative media and cements. The second part enumerates "The Plant-substances and the Method of their Detection." Forty-one substances are given, together with the reagents and methods to be used for their detection. Altogether, a more useful little book could hardly be found. It should be in every laboratory and on every working table. It is much to be hoped that some one may soon obtain the right of translating it into English, that its usefulness to English and American students may be enhanced. It is to be regretted that the only similar book in English, Penhallow's "Vegetable Histology," was so marred by the publisher, in order that it might minister to his pride in heavy paper and wide margins. Notwithstanding the fact that Poulsen's book contains twice as many pages and nearly three times as much matter, it can be sold for 3 marks instead of \$1.20. The book is an inch and a half narrower and two and a half shorter than Penhallow's, and yet the printed page is larger. Moreover it is bound as a hand-book should be, so that it will lie open at any page. We hope Mr. Penhallow will see to it that when a second edition of his book comes out it shall not sacrifice usefulness to looks.

On the Relations of Micro-Organisms to Disease, by Dr. W. T. Belfield, of Rush Medical College. Chicago, 1883. 12o., 131 pp. Illust.

Bacteria and the Germ Theory of Disease, by Dr. H. Gradle, of the Chicago Medical College. Chicago, 1883. 8o., 219 pp.

These works treat the subject in a comprehensive, careful and judicious manner. They have the merit of presenting the great mass of information on the subject, which is largely the work of foreign biologists, and consequently published in foreign languages, in a well digested and readable form. While primarily addressed to the medical fraternity, they are equally intelligible and instructive to all who are interested in the rôle of bacteria or the etiology of disease. As the works have a pathological aim, they contain no characterization of species or systematic classification. Much attention is deservedly given to methods of manipulation and the trustworthiness of observers. References to authors and their works are ample, thus facilitating the consultation of the

original sources of information, if one desires to form an independent judgment. The first mentioned work contains eighteen excellent cuts from photomicrographs, partly original, and all new to American readers; it also has an appendix, giving methods of staining and manipulation for the detection and study of bacteria. The second work is to be commended for the very full table of contents and index.

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